

REMARKS

In the Office Action, the Examiner rejected claims 1-38. By the present Response, Applicants amend claims 1, 11, 19, 29, and 34 to correct clerical errors noted by the Examiner in the Office Action. Upon entry of the amendments, claims 1-38 will remain pending in the present patent application. For at least the reasons set forth below, Applicants respectfully submit that all of pending claims 1-38 are allowable in their present form. Consequently, Applicants respectfully request reconsideration of the above-referenced application in view of the foregoing amendments and the following remarks.

Claim Objections

In the Office Action, the Examiner objected to claims 1, 11, 19, 29, and 34 for various informalities. Applicants thank the Examiner for noting these informalities and have amended the claims in the manner suggested by the Examiner, as set forth above. In view of these amendments, Applicants respectfully request withdrawal of the Examiner's objections to the claims.

Rejections Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1-28 and 34-38 under 35 U.S.C. § 103(a) as unpatentable over White (U.S. Patent No. 4,159,501) in view of Nevo (U.S. Patent No. 6,522,033). The Examiner also rejected claims 21, 22, and 29-33 as unpatentable over Gernhardt et al. (U.S. Patent No. 5,864,455) in view of White and Nevo. Applicants respectfully traverse these rejections.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce

the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

Omitted Features of Independent Claims 1, 11, 19, and 34

Applicants respectfully note that the White and Nevo references fail to disclose each element of independent claims 1, 11, 19, and 34. For instance, independent claims 1 and 11 each recite “a leakage current suppression circuit configured to … *conduct leakage current leaking into the control circuit*” (emphasis added). Similarly, independent claim 19 recites “a leakage current suppression circuit … operative to *conduct leakage current leaking into the control circuit*” (emphasis added). Notably, claims 1, 11, and 19 also variously recite controlling a switch in view of a comparison of a control signal to an *input* leakage current threshold. Additionally, independent claim 34 recites “controlling a conductive state of a solid state switch in series with a relay coil such that the relay coil is energized if a current level of an input control signal is above a predetermined *input leakage current* threshold level” (emphasis added). Because the cited references fail to disclose such elements, the cited references cannot support a *prima facie* case of obviousness with respect to independent claims 1, 11, 19, and 34.

As an initial matter, Applicants thank the Examiner for withdrawing the previous rejection upon consideration of Applicants’ previous remarks. *See Response to Office Action* filed July 5, 2005. In the last Response, Applicants amended the independent claims to clarify that recited leakage suppression circuit suppresses leakage current *entering* the control circuit. This, as noted previously, is directly contrary to the circuitry of the Nevo reference that detects and addresses current *leaving* the circuit via an

apparent ground fault. *See id.*; Office Action mailed October 5, 2005, page 2. As also noted previously, while it does include the term “leakage current,” the Nevo reference clearly employs this term to denote current leaking *to ground* via a ground fault. Thus, the term “leakage current” as used in the cited reference refers to current that is leaking *out of* the Nevo system. In the present Office Action, and in response to these and other arguments, the Examiner withdrew the previous rejections based on the Nevo reference and applied a new reference, specifically the White reference, in an attempt to overcome the noted deficiencies of the Nevo reference. The White reference, however, suffers from *precisely* the same deficiency as the Nevo reference.

The White reference discloses a control apparatus 10 that is provided to protect an electrical system 12. Col. 3, lines 56-66. Particularly, the cited reference teaches that control apparatus 10 reduces damage to components of system 12 by sensing excessive current leaking from the system 12 to ground. *Id.*; *see also* col. 3, lines 32-39. Notably, while the White reference also uses the term “leakage current,” the White reference *explicitly states* that this term is used in the reference to denote “the stray current which flows [from the circuit] *to ground*” or, in other words, the current leaking *out of* system 12. Col. 3, lines 32-39. The control apparatus 12 includes signal generating assemblies 32 and 34 that sense the current leaking *from the system to ground* and may provide a warning signal and disconnect signal, respectively, based on the sensed output current. Col. 4, lines 44-60; *see also* col. 3, line 66 – col. 4, line 14.

Conversely, the present application discloses a circuit for suppressing unintentional current that may leak *into* the control circuit. *See, e.g.*, page 6, line 24 – page 7, line 6. Accordingly, in the present disclosure, the term “leakage current” refers to this *unintentional current present in the control circuit*. Applicants also note that the background portion of the present disclosure clearly supports this meaning, reciting a particular need for circuitry that “can suppress leakage current *in* relay circuits.” Page 2, lines 3-5. Particularly, the present techniques employ a leakage current suppression

circuit to prevent this unintentional current entering, or leaking into, the control circuit from energizing the relay operator. *Id.*

In view of the discussion provided immediately above, it is evident that the White reference contains the same deficiencies recognized by the Examiner with respect to the Nevo reference. It is also readily apparent that each of the White and Nevo references, at best, discloses the detection and discontinuation of an *output* leakage current from the apparatus (i.e., current leaking *out of* the system). However, neither of the cited references even mentions any current leaking *into* the disclosed systems and, thus, each of these references similarly fails to disclose any structure reasonably comparable to “a leakage current suppression circuit configured to … conduct leakage current leaking *into* the control circuit” or controlling the switch in response to a comparison of a control signal and an *input* leakage current threshold as variously recited by the instant claims.

Because the White reference is deficient in precisely the same manner as the Nevo reference, these cited references collectively fail to disclose each and every element of the present claims. Consequently, the White and Nevo references cannot support a *prima facie* case of obviousness with respect to independent claims 1, 11, 19, or 34, or the claims depending therefrom. Additionally, Applicants respectfully note that any other reference generally directed to ground fault detection and interruption, i.e. current leaking *out of* a system to ground, even if it happens to contain the phrase “leakage current,” will likely suffer the same deficiencies as the White and Nevo references. For this reason, Applicants respectfully request that the Examiner carefully consider the full teachings of prior art references considered in the future prior to instituting a new rejection, if any.

Omitted Features of Independent Claim 29

Applicants respectfully note that the White, Nevo, and Gernhardt et al. references fail to disclose each element of independent claim 29. For instance, independent claim 29 recites “a leakage current suppression circuit … operative to conduct leakage current

leaking into the terminal block relay assembly" (emphasis added). Because the cited references fail to disclose such an element, the cited references cannot support a *prima facie* case of obviousness with respect to independent claim 29.

As discussed above with respect to claims 1, 11, 19, and 34, the White and Nevo references collectively fail to disclose a leakage current suppression circuit that conducts leakage current leaking *into* any system, such as a terminal block relay assembly. Further, the Gernhardt et al. reference fails to obviate the deficiencies of the White and Nevo references. Consequently, the White, Nevo, and Gernhardt et al. references, even considered in hypothetical combination, fail to disclose each and every element of independent claim 29. Accordingly, Applicants respectfully submit that independent claim 29, as well as its dependent claims 30-33, is allowable over the cited references.

Dependent Claims 21 and 22

Applicants additionally note that claims 21 and 22 depend from independent claim 19. As discussed above, the White and Nevo references collectively fail to disclose each element of independent claim 19. Further, Applicants respectfully submit that the Gernhardt et al. reference fails to obviate the collective deficiencies of the White and Nevo references. As a result, dependent claims 21 and 22 are allowable on the basis of their dependency from allowable independent claim 19, as well as for the subject matter recited in these dependent claims.

For at least the reasons provided above, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103 and allowance of claims 1-38.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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Patrick S. Yoder
Reg. No. 37,479
FLETCHER YODER
P.O. Box 692289
Houston, TX 77269-2289
(281) 970-4545

CORRESPONDENCE ADDRESS
ALLEN-BRADLEY COMPANY, LLC
Patent Department/704P Floor 8 T-29
1201 South Second Street
Milwaukee, Wisconsin 53204
Attention: Mr. Alexander Gerasimow
Phone: (414) 382-2000